Please amend claim 3 as follows:

3. A vaccine for eleciting an immunocontraceptive reaction in a male or female subject, which comprises an antigenic amount of a protein being member of the Short Chain Dehydrogenase/Reductase family and having the amino acid sequence of a protein encoded by the nucleic acid sequence SEQ ID NO:3 in association with a suitable pharmaceutically acceptable carrier.

REMARKS

Claim 3 is still in the application and reconsideration of this application is respectfully requested.

SEQUENCE LISTING

The paper copy of the substitute sequence listing along with the computer readable form is submitted herewith. Also enclosed is a statement under 1.821(f).

REJECTION UNDER 35 U.S.C. § 112, 1st paragraph

Claim 3 has been rejected under 35 U.S.C. § 112, 1st paragraph as containing subject matter which was not described in the specification in such a way as to reasonable convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Reconsideration by the Examiner is respectfully requested on the following grounds.

Former claim 3 as amended is believed to overcome the Examiner's reasons.

Amended claim 3 is believed to be clearly representative of the present invention described in the specification. The claim 3 has been amended by restricting the vaccine to comprising a protein of the short chain dehydrogenase-reductase family and having the amino sequence of a protein encoded by the nucleic acid sequence as depicted in SEQ ID NO: 3.

It is clearly established in the description of the present application that a protein encoded by the nucleic acid sequence SEQ ID NO: 3 is part of the short chain dehydrogenase-

reductase family, having unique features to elicit an antigenic reaction or immunization against the proteins of this family, for causing immune contraception or infertility in an immunized subject. Accordingly, anybody skilled in the art will recognize that immunization of a subject with the protein P34 as described herein can be inferred and supported by the examples provided in the present application.

Reconsideration and withdrawal of this rejection is therefore respectfully requested.

REJECTION UNDER 35 U.S.C. § 101

The Examiner has rejected the elected claim under 35 U.S.C. § 101 as claiming the same invention as that of claim 3 of prior US Patent number 5,989,549.

According to the Examiner's suggestion, claim 3 has been amended to overcome this rejection.

It is submitted, therefore, that the claim is now in condition for allowance. Reconsideration of the rejections is respectfully requested. Allowance of the claim at an early date is solicited.

In the event that there are any questions concerning this amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of the application may be expedited.

Respectfully submitted,

By: _____

Paul Marcoux
Registration No. 24,990

SWABEY OGILVY RENAULT
1981, McGill College
Suite 1600
Montreal (Quebec)
Canada, H3A 2Y3

(418) 640-5988

Date: January 27, 2003

Marked-up claim

3. An ~~immunocontraceptive~~ vaccine for eleciting an immunocontraceptive reaction in a male or female subject, which comprises an antigenic amount of ~~P34 or an antigenic fragment thereof~~ a protein being member of the Short Chain Dehydrogenase/Reductase family and having the amino acid sequence of a protein encoded by the nucleic acid sequence SEQ ID NO:3 in association with a suitable pharmaceutically acceptable carrier~~, wherein said vaccine elicits an immunocontraception response by said male or female subject after its administration~~.

3. A vaccine for eleciting an immunocontraceptive reaction in a male or female subject, which comprises an antigenic amount of a protein being member of the Short Chain Dehydrogenase/Reductase family and having the amino acid sequence of a protein encoded by the nucleic acid sequence SEQ ID NO:3 in association with a suitable pharmaceutically acceptable carrier.

SDS, pH 7.4) and extracted with phenol/chloroform and chloroform/alcohol isoamyl 24:1. The RNA was precipitated with 0.1 vol. of sodium acetate (3M, pH 5.2) and 2.5 vol. of ethanol 95%. The RNA pellets were resuspended in DEPC water. The RNA quality was evaluated by electrophoresis on a 1% agarose gel. All solutions were made with DEPC water.

Northern blot analysis

The total RNA (20 µg) prepared from hamster and human tissues was electrophorized on 1% agarose-formaldehyde gels and transferred to a nylon membrane (Qiagen, Santa Clarita, CA) using 20x SSC (3M NaCl, 0.3M Na-Citrate). Air dried Northern blots were UV cross-linked and prehybridized at 42°C for 4h in 50% (vol/vol) formamide, 0.75 M NaCl, 0.05 M NaH_2PO_4, 0.025M EDTA, 2 X Denhardt's reagent [0.2% (wt/vol) Ficol 400, 0.2% (wt/vol) polyvinylpyrrolidone, 0.2% (wt/vol) BSA], 0.2 mg/ml herring sperm DNA (Sigma Chemicals, Mississauga, ON) and 0.1% SDS. The membrane was hybridized overnight at 42°C in the same solution, to which [α-^{32}P] dCTP-labeled DNA probes were added. The membranes were then washed twice in 0.1 x SSC-0.1% SDS followed by a third wash of 30 min. at 65°C in 0.1 x SSC-0.1% SDS, and exposed on Kodak™ X-1-Mat film with intensifying screens for 6-18 h at -80°C. A RNA ladder (1.6-7.4 Kb; Biochrinder Mannheim, Laval, QC) was electrophorized in parallel and Cyclophilin probe was used as a constitutive internal control.

RT-PCR production of a P26h cDNA probe

The first amino acids sequence obtained (NKLNFSNLEVTGAGKGIG (SEQ ID NO:3)) showed a high homology with the peptide sequence of adipsin, a marker of adipocytes differentiation. From the nucleic acid sequence of adipsin, two primers were selected according to OLIGO 4.01™ primer analysis software (National Biosciences , Plymouth , MN) ,